

## EAST Search History

Ref #	Hits	Search Query	DBs	Default Operator	Plurals	Time Stamp
S9	969973	"8" and filter	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/12 13:33
S10	129	(704/227).CCLS.	USPAT; USOCR	OR	OFF	2007/03/12 13:34
S11	54	S10 and microphone	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/12 13:34
S12	34	S11 and speaker	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/12 13:34
S13	28	S12 and communicat\$5	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/12 13:34
S14	19	S13 and sound	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/12 13:34
S15	16	S14 and filter	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/12 14:00
S16	15	S15 and background	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/12 14:00
S17	5	S16 and extract\$5	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/12 14:46
S18	10954	speaker and microphone and filter and noise and frequency	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/12 14:39
S19	3192	S18 and speech\$9 and background and sound and level	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/12 14:40
S20	1896	S19 and communication and measur\$6	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/12 14:42

## EAST Search History

S21	759	S20 and \$5directional	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/12 14:45
S22	11529	("704").CLAS.	USPAT; USOCR	OR	OFF	2007/03/19 12:06
S23	59	S21 and S22	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/12 16:44
S24	27	S23 and adaptive	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/12 15:43
S25	531	S21 and telephone	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/12 16:50
S26	241	S25 and portable	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/12 16:50
S27	10970	speaker and microphone and filter and noise and frequency	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/13 08:05
S28	3199	S27 and speech\$9 and background and sound and level	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/13 08:05
S29	1899	S28 and communication and measur\$6	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/13 08:05
S30	761	S29 and \$5directional	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/13 08:05
S31	533	S30 and telephone	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/13 08:05
S32	242	S31 and portable	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/13 08:05

## EAST Search History

S33	179	S32 and gain	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/13 09:07
S34	63	S33 and (background near3 noise)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/13 14:01
S35	60	S34 and receiv\$4	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/13 10:06
S36	82085	mobile with wireless	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/13 14:01
S37	4306	(mobile or wireless) with (mic or microphone or audio or sound) with (level or power)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/13 14:03
S38	69039	(noise or interfer\$5 or distortion) near2 (extract\$5 or filter\$5)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/13 14:05
S39	11	S37 same S38	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/13 14:14
S40	0	(704/228or704/227or704/226or704 /225).CCLS.	USPAT; USOCR	OR	OFF	2007/03/13 14:15
S41	201	(704/228).CCLS.	USPAT; USOCR	OR	OFF	2007/03/13 14:15
S42	130	(704/227).CCLS.	USPAT; USOCR	OR	OFF	2007/03/13 14:15
S43	503	(704/226).CCLS.	USPAT; USOCR	OR	OFF	2007/03/13 14:15
S44	178	(704/225).CCLS.	USPAT; USOCR	OR	OFF	2007/03/13 14:16
S46	5	S41 and S42 and S43 and S44	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/13 14:16
S48	125	S37 and S38	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/13 14:55

## EAST Search History

S49	35	S48 and \$5directional	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/13 14:58
S50	66618	(portable or wireless or mobile) same adjust\$5	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/13 15:00
S51	446	(frequenc\$4 and band and background) same extract\$5	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/13 15:01
S52	11	S50 and S51	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/13 15:02
S54	4	S46 and (microphone\$2 or speaker\$2 or gain or adjustable)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/13 15:15
S56	1	S54 and portable	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/13 15:15
S57	201	(704/228).CCLS.	USPAT; USOCR	OR	OFF	2007/03/14 07:51
S58	130	(704/227).CCLS.	USPAT; USOCR	OR	OFF	2007/03/14 07:51
S59	503	(704/226).CCLS.	USPAT; USOCR	OR	OFF	2007/03/14 07:51
S60	178	(704/225).CCLS.	USPAT; USOCR	OR	OFF	2007/03/14 07:51
S61	5	S57 and S58 and S59 and S60	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/14 07:51
S62	4	S61 and (microphone\$2 or speaker\$2 or gain or adjustable)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/14 08:06
S64	6785	mobile and communication and speech and noise and background and frequency	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 08:07
S65	47	S57 and S64	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 08:21

## EAST Search History

S66	28	S58 and S64	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 08:55
S67	112	S59 and S64	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 08:07
S68	23	S60 and S64	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 08:07
S69	32	S65 and adapt\$5	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 09:02
S70	18	S66 and adapt\$5	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 09:02
S71	91	S67 and adapt\$5	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 12:44
S72	20	S68 and adapt\$5	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 09:03
S78	201	(704/228).CCLS.	USPAT; USOCR	OR	OFF	2007/03/14 14:23
S79	130	(704/227).CCLS.	USPAT; USOCR	OR	OFF	2007/03/14 14:23
S80	503	(704/226).CCLS.	USPAT; USOCR	OR	OFF	2007/03/14 14:23
S81	178	(704/225).CCLS.	USPAT; USOCR	OR	OFF	2007/03/14 14:23
S82	6785	mobile and communication and speech and noise and background and frequency	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 14:23
S83	47	S78 and S82	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 14:23
S84	28	S79 and S82	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 14:23

## EAST Search History

S85	112	S80 and S82	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 14:23
S86	23	S81 and S82	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 14:23
S87	32	S83 and adapt\$5	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 14:23
S88	18	S84 and adapt\$5	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 14:23
S89	91	S85 and adapt\$5	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 14:23
S90	20	S86 and adapt\$5	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/14 14:23
S91	127	S87 or S88 or S89 or S90	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/14 14:24
S93	93	S91 and measur\$6	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/14 14:25
S94	28	S93 and (background same noise same measur\$6)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/14 14:26
S95	4445	proximity adj effect	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/14 16:54
S96	110	S95 and noise and extract\$5	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/14 16:55
S97	69	S96 and filter	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/14 16:55

## EAST Search History

S98	7	S97 and microphone and sound and background	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/14 16:55
S10 1	3	(US-6591234-\$ or US-6453289-\$ or US-5544250-\$).did.	USPAT	OR	OFF	2007/03/15 10:59
S10 2	3	S101 and (mobile or telephone or wireless or portable)	USPAT	OR	OFF	2007/03/15 11:03
S10 3	2	S102 and microphone	USPAT	OR	OFF	2007/03/15 11:01
S10 4	4	(US-6591234-\$ or US-6453289-\$ or US-5544250-\$ or US-6618701-\$). did.	USPAT	OR	OFF	2007/03/15 11:03
S10 5	4	S104 and (mobile or telephone or wireless or portable)	USPAT	OR	OFF	2007/03/15 11:03
S10 6	3	S105 and microphone	USPAT	OR	OFF	2007/03/15 13:22
S10 7	4	(US-6591234-\$ or US-6453289-\$ or US-5544250-\$ or US-6618701-\$). did.	USPAT	OR	OFF	2007/03/15 13:23
S10 8	4	S107 and (mobile or telephone or wireless or portable)	USPAT	OR	OFF	2007/03/15 13:23
S10 9	3	S108 and microphone	USPAT	OR	OFF	2007/03/15 13:23
S11 0	3	S109 and background	USPAT	OR	OFF	2007/03/15 13:23
S11 1	4451	proximity adj effect	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/15 15:40
S11 2	69	S111 and microphone	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/15 15:40
S11 3	37	S112 and speaker	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/15 16:17
S11 4	28	S113 and (minimize or reduce or eliminate)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/15 16:18
S11 5	13	S113 and (minimize)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/15 16:19

## EAST Search History

S11 6	1	S114 and ((proximity adj effect) with (minimize or reduce or eliminate))	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/15 16:20
S11 7	4	(US-6591234-\$ or US-6453289-\$ or US-5544250-\$ or US-6618701-\$). did.	USPAT	OR	OFF	2007/03/16 07:50
S11 8	4	S117 and (mobile or telephone or wireless or portable)	USPAT	OR	OFF	2007/03/16 07:50
S11 9	3	S118 and microphone	USPAT	OR	OFF	2007/03/16 08:51
S12 0	89	(proximity adj effect) with frequency	USPAT	OR	OFF	2007/03/16 08:52
S12 1	0	S120 with background	USPAT	OR	OFF	2007/03/16 08:52
S12 3	4	(proximity adj effect) with frequency with noise	USPAT	OR	OFF	2007/03/16 08:55
S12 4	218	(proximity adj effect) with (chang\$4 or manipulats\$4 or alter\$5 or (sound adj level) or transmit\$6)	USPAT	OR	OFF	2007/03/16 09:04
S12 5	8	(proximity adj effect) with manipulats\$5	USPAT	OR	OFF	2007/03/16 10:01
S12 9	4451	proximity adj effect	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/16 10:02
S13 0	108	S129 and sound	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/16 10:02
S13 1	94	S130 and background	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/16 10:02
S13 2	42	S131 and microphone	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/16 10:14
S13 3	37	S132 and frequency	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/16 10:14
S13 4	11559	("704").CLAS.	USPAT; USOCR	OR	OFF	2007/03/16 10:25
S13 5	0	("20and(proximityadjeffect)").PN.	USPAT; USOCR	OR	OFF	2007/03/16 10:25



## EAST Search History

S13 6	1674	proximity with frequency with (adjust\$5 or select\$5 or variation\$2 or vary\$5 or manipulats\$5 or alter\$6)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/16 11:14
S13 7	3	S136 and S134	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/16 11:10
S14 0	77	S136 and speech	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/16 11:12
S14 1	62	S140 and effect	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/16 11:12
S14 2	52	S136 and (proximity-effect or (proximity adj effect))	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/16 11:32
S14 3	0	("20040143433").PN.	USPAT; USOCR	OR	OFF	2007/03/16 11:32
S14 4	0	("20040143433a1").PN.	USPAT; USOCR	OR	OFF	2007/03/16 11:32
S14 5	0	("us00001").PN.	USPAT; USOCR	OR	OFF	2007/03/16 11:32
S14 6	35208	frequency adj characteristic	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 08:22
S14 7	11559	("704").CLAS.	USPAT; USOCR	OR	OFF	2007/03/19 08:23
S14 9	196	S146 and S147	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 08:25
S15 0	4	S149 and proximity and effect	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 08:34
S15 1	1	S150 and (microphone or speaker)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 08:38
S15 2	4241	S147 and frequency and (alter\$5 or manipulat\$5 or change or vary\$4 or variation\$2) and speech and signal	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 08:40

## EAST Search History

S15 3	507	S152 and (mobile or portable) and microphone and speaker	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 08:41
S15 4	33	S153 and "bi-directional"	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 08:42
S15 5	9	S154 and proximity	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 08:43
S15 7	6	S155 and effect	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 08:45
S15 9	1	S147 and "proximity effect"	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 08:47
S16 0	1	S147 and (proximity adj effect)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 08:47
S16 1	4454	"proximity effect"	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 08:47
S16 2	20	S161 and speech and signal and microphone	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 08:48
S16 3	503	(704/226).CCLS.	USPAT; USOCR	OR	OFF	2007/03/19 09:21
S16 4	6798	mobile and communication and speech and noise and background and frequency	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/19 09:21
S16 5	112	S163 and S164	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/19 09:21
S16 6	91	S165 and adapt\$5	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/19 09:21

## EAST Search History

S16 7	10	S166 and delay and adder	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 09:21
S16 8	8	(US-5732390-\$ or US-5867815-\$ or US-5839101-\$ or US-6351731-\$ or US-5485522-\$ or US-6480824-\$ or US-6937978-\$ or US-4630305-\$). did.	USPAT	OR	OFF	2007/03/19 09:21
S16 9	3	S168 and adder and delay	USPAT	OR	OFF	2007/03/19 09:22
S17 2	11559	("704").CLAS.	USPAT; USOCR	OR	OFF	2007/03/19 12:06
S17 3	28	("5544250").URPN.	USPAT	OR	OFF	2007/03/19 12:11
S17 4	1	"4809328".PN.	USPAT; USOCR	OR	OFF	2007/03/19 12:11
S17 5	1	"5337251".PN.	USPAT; USOCR	OR	OFF	2007/03/19 12:11
S17 6	4	(US-6453289-\$ or US-5544250-\$ or US-6618701-\$ or US-6591234-\$). did.	USPAT	OR	OFF	2007/03/19 13:56
S17 7	4	S176 and (telephone or mobile or radio or front or speaker or microphone or background or unidirectional or \$5directional)	USPAT	OR	ON	2007/03/19 14:27
S17 8	4	S176 and (telephone or mobile or radio or front or speaker or microphone or background or unidirectional or \$5directional) and hand\$5	USPAT	OR	ON	2007/03/19 15:07
S17 9	11559	("704").CLAS.	USPAT; USOCR	OR	OFF	2007/03/19 16:31
S18 0	483	S179 and (hand\$3set or handset)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 15:13
S18 1	472	S180 and (telephone or mobile or portable)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 15:14
S18 2	44	S181 and (bi\$2directional or uni\$2directional)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 15:20
S18 3	0	("7andmicrophoneandsecondandfirs tand(noiseor"backgroundsound)"). PN.	USPAT; USOCR	OR	OFF	2007/03/19 16:31

## EAST Search History

S18 4	1784	S179 and microphone and second and first and ("background sound" or noise)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 16:33
S18 5	486	S184 and speaker and (portable or mobile)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 16:34
S18 6	6	S185 and uni\$2directional and bi\$2directional	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/19 16:36
S18 7	178	(704/225).CCLS.	USPAT; USOCR	OR	OFF	2007/03/19 16:37
S18 8	11577	("704").CLAS.	USPAT; USOCR	OR	OFF	2007/03/21 13:25
S18 9	70	S188 and bi\$2directional and uni\$2directional	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/21 13:26
S19 0	29	S189 and microphone	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/21 13:28
S19 1	3	S188 and (microphone same uni\$2directional same bi\$2directional)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/21 13:30
S19 2	5865	handheld and speaker and microphone	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/22 08:57
S19 3	987	S192 and handset	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/22 08:57
S19 4	860	S193 and first and second	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/22 09:01
S19 5	674	S194 and radio and telephone	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/22 09:02
S19 6	75	S195 and (background with (noise or sound))	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/22 09:03

## EAST Search History

S19 7	71	S196 and (radio\$2telephone or mobile or portable)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/22 09:05
S19 8	62	S197 and speech and sound	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/22 09:08
S19 9	17	S198 and microphones	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/22 10:54
S20 1	17	S199 and (background same (sound or noise))	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/22 10:55
S20 2	17	S201 and two	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/22 10:56
S20 3	12	S201 and (two same microphone)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/22 11:01
S20 4	651	background same (noise or sound) same microphone same two	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/22 11:04
S20 5	429	S204 and speaker	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/22 11:02
S20 6	277	S205 and telephone	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/22 11:03
S20 7	97	S206 and cellular	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/22 11:05
S20 8	77	S207 and (first with second)	US-PGPUB; USPAT; JPO; DERWENT	OR	ON	2007/03/22 11:10
S20 9	11577	("704").CLAS.	USPAT; USOCR	OR	OFF	2007/03/22 11:10

## EAST Search History

S21 0	6	S209 and ((microphone same second same first) with background)	US-PGPUB; USPAT; JPO; DERWENT	OR	OFF	2007/03/22 11:11
----------	---	--	--	----	-----	------------------